

**A NEW SPECIES OF *PSEPHENOTARSIS* ARCE-PÉREZ (COLEOPTERA:
BYRRHOIDEA: PSEPHENIDAE) FROM GUATEMALA**

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Abstract.—*Psephenotarsis shepardi*, new species, is described and illustrated from specimens collected in Purulha (1798 m), Baja Verapaz State, Guatemala. *Psephenotarsis shepardi* can be distinguished from *Psephenotarsis triangularis* Arce-Pérez, by the following characteristics: total body length, antenna type and length; pronotal carina; type and disposition of elytral vestiture; and length and shape of the male genital structure.

Resumen.—*Psephenotarsis shepardi* nueva especie es descrita e ilustrada con especímenes colectados en Purulha (1798 m) estado de Baja Verapaz, Guatemala. *Psephenotarsis shepardi* puede diferenciarse de *Psephenotarsis triangularis* por la siguiente combinación caracteres: longitud total del cuerpo; tipo y longitud de las antenas; la carina pronotal; tipo y disposición de la vestidura elytral; longitud y forma de la estructura genital del macho.

Key Words: Psephenidae, Psepheninae, *Psephenotarsis*, new species, Guatemala

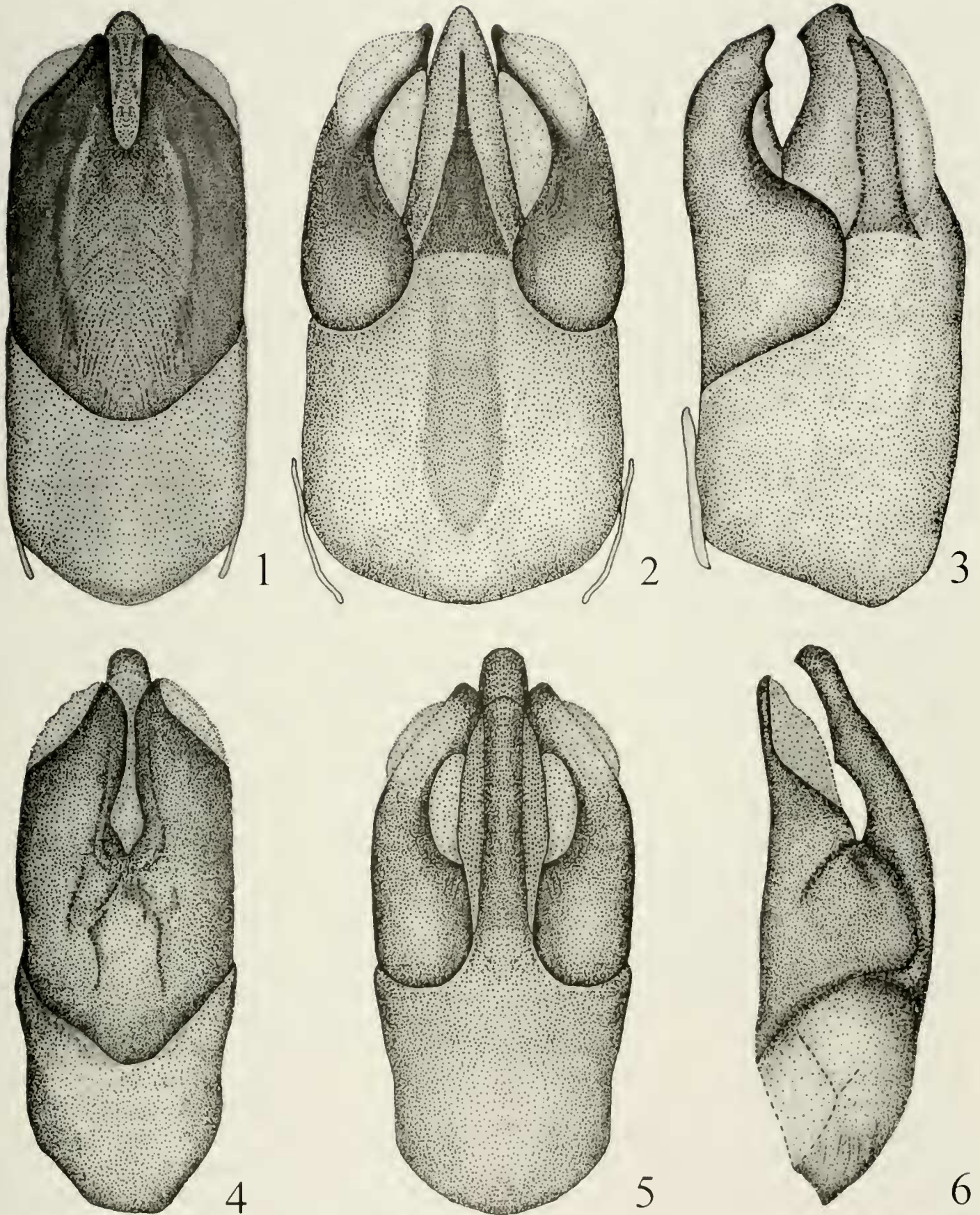
The family Psephenidae is represented in Central America by three genera and five species, two of which are known from Guatemala: *Dicranopselaphus venosus* Champion, 1897, from a town called Zapote, and *Psephenops grouvelli* Champion, 1913, from Lanquin, Alta Verapaz (Arce-Pérez and Shepard 2001). The genus *Psephenotarsis* Arce-Pérez has been known from a single species, *P. triangularis* Arce-Pérez, occurring in Mexico (Arce-Pérez and Novelo-Gutiérrez 2001). A second species is herein described from four specimens from Guatemala, the first record of the genus from Central America.

***Psephenotarsis shepardi* Arce-Pérez,
new species
(Figs. 1–3)**

Holotype male.—Body oval, elongate, and depressed; integument reddish black,

dorsally completely covered with dense vestiture of short and long reddish yellow setae with golden highlights; ventrally with dense vestiture of only long setae with same color. Head, pronotum, and scutellum black; antenna and elytra reddish black, elytra without striae, with light yellow marking in mid basal region; legs with reddish black coxae, tibiae, and tarsi; trochanters and femora reddish yellow, covered with vestiture of long reddish-yellow setae with golden highlights; total length 4.45 mm, maximum humeral width 1.85 mm.

Head: Black, short, transverse; eyes spherical, very prominent, dark reddish, with postocular area yellow; clypeus subrectangular, wider than long, declivous at an angle of less than 90 degrees from plane of frons, distal margin widely emarginate; labrum like clypeus but shorter; fronto clypeal surface with long, robust, stiff setae; an-



Figs. 1–6. Male genitalia. 1–3. *Psephenotarsis shepardi*. 1, Dorsal aspect. 2, Ventral aspect. 3, Ventrolateral aspect. 4–6. *Psephenotarsis triangularis*. 4, Dorsal aspect. 5, Ventral aspect. 6, Lateral aspect. (Figs. 4 and 6 from Arce-Pérez and Novelo Gutiérrez 2001; Fig. 5 drawn from holotype).

tenna long, filiform, 11-segmented, reaching apex of scutellum; scape and pedicel yellowish, 9 flagellar segments reddish black; scape larger than all other segments, slightly curved, pedicel half as long as scape, covered with short reddish setae; maxillary palp 4-segmented, slightly longer than first three antennomeres combined; three basal palpomeres subcylindric, first one shortest, second one three times longer than first one and wider, third palpomere 0.75 as long as second but wider, fourth one 0.80 shorter than second but stouter and acuminate, laterally compressed and truncate at apex, all palpomeres dark reddish and covered with dark reddish setae; labial palp small, 3-segmented, extending beyond basal margin of second maxillary palpomere; basal two labial palpomeres subcylindric, larger than subspherical third one, all of them dark reddish with reddish setae.

Thorax: Pronotum subtrapezoidal (basal width 1.65 mm, apical width 0.70 mm), wider than long (width 1.65 mm, apical length 0.90 mm), its anterior margin arcuate, posterior margin bisinuate and slightly narrower than elytral base, lateral margins straight and convergent at anterior half, then suddenly expanding at posterior half, posterolateral angles rounded, ending with a acute apex; with a longitudinal carina weakly developed at distal half, with wide, shallow, long depression at each side of carina; in lateral view, pronotal disc (except for posterolateral expansions) convex; prosternum short, neither raised nor carinate at its mid basal portion, prosternal process long, parallel-sided at middle, then gradually diverging to form a lanceolate apex, with a weak longitudinal carina on its apex, which reaches anterior half of mesosternum. Mesonotum with scutellum short, triangular, its apex rounded. Elytra 3.1 mm long (from base to apex of internal suture), 1.85 mm wide (measured over calla humeralis), surface without striae; gradually widening caudad, reaching its maximum width at middle, then narrowing toward apex, not covering abdomen entirely, lateral

margins expanded; mesosternum short, clearly grooved for reception of prosternal process. Metasternum bulky with longitudinal, shallow, wide groove at middle that ends in a semi-triangular cavity between metacoxae.

Legs: Procoxa conical-transverse, mesocoxa conical-transverse, metacoxa completely transverse; trochanters long and subtriangular; femora ovate and robust, with dark yellowish setae; tibiae slender; protibia with distinct apical posterolateral denticle, metatibia as long as femur; tarsi 5-segmented, the first four short and notably triangular shaped, flattened and widely emarginate at apex, beset with short reddish setae, tarsomeres 1 and 2 slightly lobed ventrally, with spongy vestiture; setae on first tarsomere reaching basal half of second, setae on second tarsomere extending to base of fourth segment; fifth tarsomere longest, slightly longer than all preceding ones together (0.34 mm compared to 0.24 mm), subcylindrical and smooth, tarsomere proportions 0.10, 0.18, 0.06, 0.07, 0.34 mm; with claws entire, long, curved, without denticles or accessory membranes.

Abdomen: Vestiture long, fine, and dense, reddish yellow with golden highlights. Seven sterna visible, usually segment 6 hidden under segment 5. Sternum 2 largest. Posterior margins of sterna 1 and 2 slightly sinuate at middle. Sterna 6 and 7 reddish yellow; sternum 6 short, posterior margin widely concave; sternum 7 very short and oval. Pygidium oval, convex, with long dark reddish setae.

Genitalia: Short, wide, subrectangular, trilobate, total length 0.60 mm. Paramere slightly shorter than median lobe, robust; in dorsal view (Fig. 1) its basal half subrectangular with internal margin in close contact with that of other paramere, its apical half parsimoniously narrow at 0.80 of paramere's length ending in a apex rounded; its internal margin straight; length 0.30 mm; in ventral and ventrolateral view (Fig. 2-3) wide, curved and with a small tooth in internal margin near apex; a translucent mem-

brane at lateroapical part. Median lobe long, fingerlike, membranous (Fig. 2), length 0.32 mm, bearing a longitudinal subtriangular sclerite along base which measures 0.20 in length; ventrolateral view with truncated apex (Fig. 3); dorsal area of phallobase concave (Fig. 1); ventral portion very bulky, subrectangular; length 0.28 mm, width 0.18 mm (Fig. 2).

Female.—Unknown (females of this group appear to be less frequently collected).

Variation in paratype series.—Two specimens have clear elytra, so that the yellow marking is less intense; another specimen has reddish-gray ventral integument. Measurements: total body length 4.35–4.45 mm; maximum humeral width 1.75–1.85 mm; pronotum length 0.80–0.90 mm, basal width 1.50–1.65 mm; elytral length 3.00–3.10 mm.

Discussion.—*Psephenotarsis shepardi* is similar to *Psephenotarsis triangularis*, but the two are distinguishable by the following combination of characteristics (those of *P. triangularis* in parentheses): Total length 4.35–4.45 mm (4.20 mm), maximum humeral width 1.75–1.85 mm (2.05 mm); antennae filiform, reaching scutellum apex (moniliform, not reaching scutellum apex); pronotum with longitudinal carina weakly developed (pronotum without carina); pronotum with posterolateral angles rounded, ending in an acute apex (posterolateral angles obtuse); elytra completely covered with dense vestiture of short and long reddish-yellow setae (elytra beset with four longitudinal bands of short and long reddish-yellow setae); paramere with apical half parsimoniously narrowing (Fig. 1) (paramere with apical half abruptly and markedly narrowing (Fig. 4)); paramere with small tooth in the internal margin near apex (Fig. 3) (paramere without tooth (Fig. 6)); paramere with internal margin straight

(Fig. 1) (paramere with internal margin sigmoid (Fig. 4)); median lobe long, fingerlike, membranous (Fig. 2) (median lobe long, subcylindrical, sclerotized (Fig. 5)).

Type material.—Holotype ♂ labeled: GUATEMALA, Baja Verapaz, 0.3 km sur de Purulha, stream at the bridge on Hwy 14, 1798 m, 14-VII-2001, W. Shepard col. Paratypes: same data as holotype (3 ♂). Holotype and one paratype deposited in Essig Museum of Entomology, University of California, Berkeley, USA; two paratypes deposited in Colección Entomológica (IEXA), Instituto de Ecología, A.C., Xalapa, Veracruz, México.

Etymology.—It is with pleasure that I dedicate this species to Dr. William D. Shepard, who kindly provided the specimens that support this work.

Habitat.—In the stream, the water was cool and ran over a substrate of sand, gravel and rocks. The current was slow to moderate in speed. There were a few submerged leaves on the rocks. Associated taxa included: *Anchytarsis palpalis* Champion, *Macrelmis* sp., *Heterelmis* sp., and *Neoelmis* sp.

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